UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,498	02/23/2004	Dmitry Grebenev	063170.6658	2208

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EXAMINER
MEHRMANESH, ELMIRA

ART UNIT	PAPER NUMBER
2113	

DATE MAILED: 09/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/784,498	GREBENEV, DMITRY
	Examiner	Art Unit	
	Elmira Mehrmanesh	2113	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 February 2004*.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

The application of Grebenev, for a "Kernel-level method of flagging problems in

applications" filed February 23, 2004, has been examined.

Claims 1-20 are presented for examination.

Claims 1-20 are rejected under 35 USC § 102.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b),
by another filed in the United States before the invention by the applicant for patent or (2) a
patent granted on an application for patent by another filed in the United States before the
invention by the applicant for patent, except that an international application filed under the treaty
defined in section 351(a) shall have the effects for purposes of this subsection of an application
filed in the United States only if the international application designated the United States and
was published under Article 21(2) of such treaty in the English language.

Claims 1-11, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by

Sen (U.S. PGPUB No. 20040261081).

As per claim 1, Sen discloses a method of identifying problems in applications

(Fig. 7), comprising: monitoring at a kernel level system resource usage of one or more

running applications without modifying run-time environments of the running

applications (Fig. 7, element 704)

and identifying from the monitored system usage, an application whose system

usage pattern satisfies a predetermined criteria associated with one or more problems

(Fig. 7, elements 706, 710).

As per claim 2, Sen discloses the system resource usage comprises one or more processes that the one or more running applications have spawned (Fig. 7, element 704).

As per claim 3, Sen discloses the system resource usage comprises central processing unit usage of the one or more running applications (Fig. 6, element 616).

As per claim 4, Sen discloses the system resource usage comprises memory usage of the one or more running applications (Fig. 4).

As per claim 5, Sen discloses producing an output comprising at least the system resource usage associated with each of the one or more running applications (Fig. 6, element 608).

As per claim 6, Sen discloses identifying from the output an application whose system resource usage pattern satisfies a predetermined criteria associated with one or more problems (Fig. 7, elements 706, 710).

As per claim 7, Sen discloses the predetermined criteria is an increase in amount of the system resource usage from a first period to a second period (Fig. 4 and Fig. 7,

element 706).

As per claim 8, Sen discloses the predetermined criteria is a continuous increase

in amount of the system resource usage from a first period to a second period (Fig. 4

and Fig. 7, element 706).

As per claim 9, Sen discloses using an available kernel level tool to obtain data

associated with the system resource usage (Fig. 2, element 204).

As per claim 10, Sen discloses using an available kernel level tool to obtain data

that includes the system resource usage (Fig. 2, element 204)

and filtering the data to obtain a selected system resource usage (page 4,

paragraph [0035]).

As per claim 11, Sen discloses using the filtered data to identify an application

(Fig. 7, element 704) whose system resource usage pattern satisfies a predetermined

criteria associated with one or more problems (Fig. 7, elements 706, 710).

As per claim 18, Sen discloses a system for identifying problems in applications

(Fig. 7), comprising: a data collection module operable to retrieve information about a

running application at a kernel level (Fig. 7, element 704)

and a data analysis module operable to determine from the retrieved information

an abnormal system usage pattern in the information (Fig. 7, elements 702, 706).

Claims 12-17, and 19-20 are rejected under 35 U.S.C. 102(e) as being

anticipated by Herger et al. (U.S. PGPUB No. 20020161932).

As per claim 12, Herger discloses a method of identifying memory problems in

applications (Fig. 1), comprising:

monitoring at a kernel level memory usage of a running application without

modifying a run-time environment of the running application (page 2, paragraph [0016])

and producing an output comprising at least the memory usage (Fig. 1, element 24,

Memory Statistics).

As per claim 13, Herger discloses analyzing the output (page 3, paragraph

[0037]) to identify a memory problem (page 3, paragraphs, [0028], [0034] and [0035]).

As per claim 14, Herger discloses a method of identifying memory problems in

applications, comprising:

monitoring at a kernel level memory usage of one or more running applications

without modifying run-time environments of the running applications (page 2, paragraph

[0016])

producing an output comprising at least the memory usage of one or more

running applications (Fig. 1, element 24, *Memory Statistics*)

and identifying from the output (page 3, paragraph [0037]) an application whose

memory usage pattern satisfies a predetermined criteria associated with one or more

memory problems (page 3, paragraphs, [0028], [0034] and [0035]).

As per claim 15, Herger discloses a method of identifying memory problems in

applications (Fig. 1), comprising:

monitoring at a kernel level memory usage of one or more running applications

without modifying run-time environments of the running applications (page 2, paragraph

[0016])

and identifying from the monitored memory usage (page 3, paragraph [0037]) an

application whose memory usage pattern satisfies a predetermined criteria associated

with one or more memory problems (page 3, paragraphs, [0028], [0034] and [0035]).

As per claim 16, Herger discloses the monitored memory usage comprises at

least a stack memory, data memory, and text memory (Fig. 1, element 20).

As per claim 17, Herger discloses a method of identifying memory problems in

applications (Fig. 1), comprising:

collecting system resource usage at a kernel level of one or more running applications (Fig. 1, element 24) without modifying run-time environments of the running applications (page 2, paragraph [0016])

and identifying from the collected system resource usage (page 3, paragraph [0037]) an application whose system resource usage pattern satisfies a predetermined criteria associated with one or more system resource usage problems (page 3, paragraphs, [0028], [0034] and [0035]).

As per claim 19, Herger discloses a program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps of identifying problems in applications, comprising:

monitoring at a kernel level system resource usage of one or more running applications without modifying run-time environments of the running applications (page 2, paragraph [0016])

and identifying from the monitored system usage (page 3, paragraph [0037]) an application whose system usage pattern satisfies a predetermined criteria associated with one or more problems (page 3, paragraphs, [0028], [0034] and [0035]).

As per claim 20, Herger discloses the system resource usage is memory usage, CPU usage, or one or more spawned processes, or combinations thereof (Fig. 1, element 20).

Related Prior Art

The following prior art is considered to be pertinent to applicant's invention, but nor relied upon for claim analysis conducted above.

Rishi et al. (U.S. Patent No. 5,953,530), "Method and apparatus for run-time memory access checking and memory leak detection of a multi-threaded program".

Sankaranarayan et al. (U.S. Patent No. 6,799,208), "Resource manager architecture".

Dubal (U.S. Patent No. 6,976,193), "Method for running diagnostic utilities in a multi-threaded operating system environment".

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elmira Mehrmanesh whose telephone number is (571) 272-5531. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W. Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).